

POOR LEGIBILITY

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SFUND RECORDS CTR
88041107

The Dow Chemical Company

2030 Dow Center
March 6, 1992

Midland, Michigan 48674

SFUND RECORDS CTR
0639-02432

Mr. Thomas J. Dunkelman (H-7-1)
Project Manager
U. S. Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, California 94105

REQUEST FOR INFORMATION DEL AMO SITE - LOS ANGELES, CA

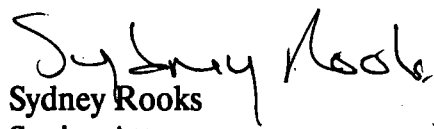
Dear Mr. Dunkelman:

This response is submitted on behalf of The Dow Chemical Company ("Dow") to the United States Environmental Protection Agency's ("EPA") CERCLA Section 104(e) Request for Information about pipelines operated by Dow in the vicinity of the Del Amo site. Documents responsive to the request are attached.

Dow's response was prepared with the assistance of E. L. Ruddick of the Engineering Department of Dow's Long Beach Terminal and R. B. Allen of Dow's Hydrocarbons Department in Houston, Texas. W. J. Witt, CERCLA Operations Manager of Dow Chemical USA was also consulted in the preparation of this response. The questionnaire provided by EPA as Attachment B to the Information Request and responses thereto are submitted as Attachment A to this letter.

Please do not hesitate to contact me if you have any questions about our response. Again, we thank you for giving us an extension of time within which to respond until Monday, March 9, 1992.

Very truly yours,


Sydney Rooks
Senior Attorney
517-636-8098

lbr/SR.652

**RESPONSE OF THE DOW CHEMICAL COMPANY TO EPA'S CERCLA 104(E)
PIPELINE INFORMATION REQUEST**

ATTACHMENT A

1. Identify all pipelines and product transmission lines owned or operated by your company either currently or at some time in the past within a one-mile radius of the Del Amo site. This should include all pipelines identified on p. 68 and p. 69 of the most recent Los Angeles Thomas Brothers map book. For each pipeline identified, provide the following information:

- a. Location of the pipeline (identify verbally and on a map);

Answer

The pipeline in question runs from Dow's Long Beach Terminal to Dow's Torrance Plant. The pipeline's location is depicted on "Map 1" which is attached to this response. The Del Amo site is depicted on "Map 1" with cross-hatching. The pipeline runs through a corridor on the south side of the Del Amo site.

- b. Size of the pipeline;

Answer

The size of the pipeline varies from three inches to four inches. It is four inches in diameter at the Del Amo site.

- c. Date of construction of the pipeline;

Answer

The pipeline was purchased from Mobil Oil in 1973. Mobil identified the pipeline as "LM136." Upon information and belief, the pipeline was installed by Mobil between 1947 and 1950.

- d. Type of materials transported through the pipeline (include a list of all materials, approximate volumes of all materials transported through the pipeline, approximate dates of transport of each material identified);

Answer

Since its purchase in 1973, Dow has transported only styrene through the pipeline. Dow does not know what materials were transported by Mobil in the pipeline prior to 1973.

**RESPONSE OF THE DOW CHEMICAL COMPANY TO EPA'S CERCLA 104(E)
PIPELINE INFORMATION REQUEST**

ATTACHMENT A

- e. Thorough discussion of the pipeline construction;

Answer

The pipeline is constructed of carbon steel of an estimated wall thickness of 0.25 inches. The pipeline has an exterior coating of coal tar. It is cathodically protected via impressed current.

- f. Results of all pressure tests conducted on the pipeline to date;

Answer

Pressure test data reports for the years 1988 to 1991 are attached. Dow's records search for test data pertaining to earlier years is continuing. Should additional responsive documents be found, Dow reserves the right to seasonably submit a supplemental response and submit those documents to EPA.

- g. Indicate whether the pipeline is an interstate or intrastate pipeline.

Answer

The California State Fire Marshall has identified this pipeline as an intrastate pipeline pursuant to CSFM No. 072, CSFM Inspection Unit No. 130.

- h. Indicate and describe fully whether any other parties have been allowed to lease or otherwise use the pipeline.

Answer

Dow has not leased the pipeline to any party since purchasing the pipeline in 1973 nor has the pipeline been used by any other party since that date.

2. Provide a complete discussion of any suspected leaks or discharges that have occurred from any pipelines identified above. In your discussion, describe the following:
- a. cause of the leak or discharge;
 - b. date of the leak or discharge;

**RESPONSE OF THE DOW CHEMICAL COMPANY TO EPA'S CERCLA 104(E)
PIPELINE INFORMATION REQUEST**

ATTACHMENT A

- c. types and volumes of material that leaked or were discharged;
- d. actions taken to stop the leak or discharge;
- e. actions taken to remediate soil or groundwater contaminated by the leak or discharge.

Answer a.-e.

No releases have been recorded since 1973 in a one-mile radius of the Del Amo site. Three releases occurred at a location more than one mile west of the site between February 13, 1985, and February 15, 1986. Dow estimated that less than one barrel of styrene was released during each occurrence.

On or about February 13, 1985, a minor release from the pipeline occurred in an area more than one mile west of the Del Amo site, between Arlington Avenue and Amapola Avenue, due to a pinhole leak which occurred during construction in the area. In response, Dow conducted a removal of the styrene and associated soils and repaired the pipeline. The styrene which was released was confined to the upper two to three feet of soil below grade in the area of occurrence.

On or about July 18, 1985, a similar release was detected in the same location. Again, styrene was confined to the upper two to three feet of soil below grade. Dow repeated a removal action and repaired the pipeline.

On or about February 15, 1986, a third release was detected at the location in question. As before, a small quantity of styrene was confined to the upper two to three feet of soil below grade. Dow conducted a removal of the styrene and associated soil and, in April 1986, replaced the section of the pipeline involved.

The site of these three releases is identified on "Map 2" which is attached to this response.

These incidents are described in documents filed with the California State Fire Marshall in 1991 and which are attached to this response. Upon information and belief, the releases were caused during construction by Mobil at an adjoining facility. Dow is unaware of any groundwater contamination caused by the releases.

**RESPONSE OF THE DOW CHEMICAL COMPANY TO EPA'S CERCLA 104(E)
PIPELINE INFORMATION REQUEST**

ATTACHMENT A

3. Are you aware of any pipelines, owned or operated by your company, that may have leaked, discharged, or otherwise contributed to soil or groundwater contamination in the vicinity of the Del Amo site. If so, describe fully.

Answer

No.

4. Provide a detailed discussion of the ability of your company to detect leaks or discharges from the pipelines identified above. Include in your response an estimation of the maximum volume of material that could leak or be discharged from the above identified pipelines without being detected or noticed. Include in your discussion any changes or improvements in your leak detection capabilities during the period of your operation of this pipeline.

Answer

The pipeline is tested annually at 800 psi for 8 hours and visually inspected. The line is then held at this test pressure for an additional 16 hours for a total of 24 hours of testing. Visual inspection of the line is carried out in accordance with the California Pipeline Safety Act of 1981, as amended, January 1, 1990, which requires such inspections 26 times per year at a maximum three-week interval.

The pipeline's input and output are continuously metered and monitored by computer. Normal flow rate is approximately 35,000 pounds per hour (approximately 70 GPM). Upon the detection of a deviation of more than 500 pounds per hour for a period of one minute between the inlet meter and the outlet meter, an alarm is automatically sounded by the monitoring computer. The computer-controlled system has been operational since approximately 1987. Between 1973 and 1987, a monthly reconciliation between tank output at the source at the Long Beach Terminal and tank input at the Torrance plant was performed.

5. Provide a detailed discussion of the ability of your company to detect and quantify leaks or discharges from a particular segment of a pipeline as compared the ability to detect such leaks or discharges over a significant length of pipeline.

**RESPONSE OF THE DOW CHEMICAL COMPANY TO EPA'S CERCLA 104(E)
PIPELINE INFORMATION REQUEST**

ATTACHMENT A

Answer

Same as No. 4 above.

6. Are you aware of any pipeline, owned or operated by other companies, that may have leaked, discharged, or otherwise contributed to soil or groundwater contamination in the vicinity of the Del Amo site. If so, describe fully.

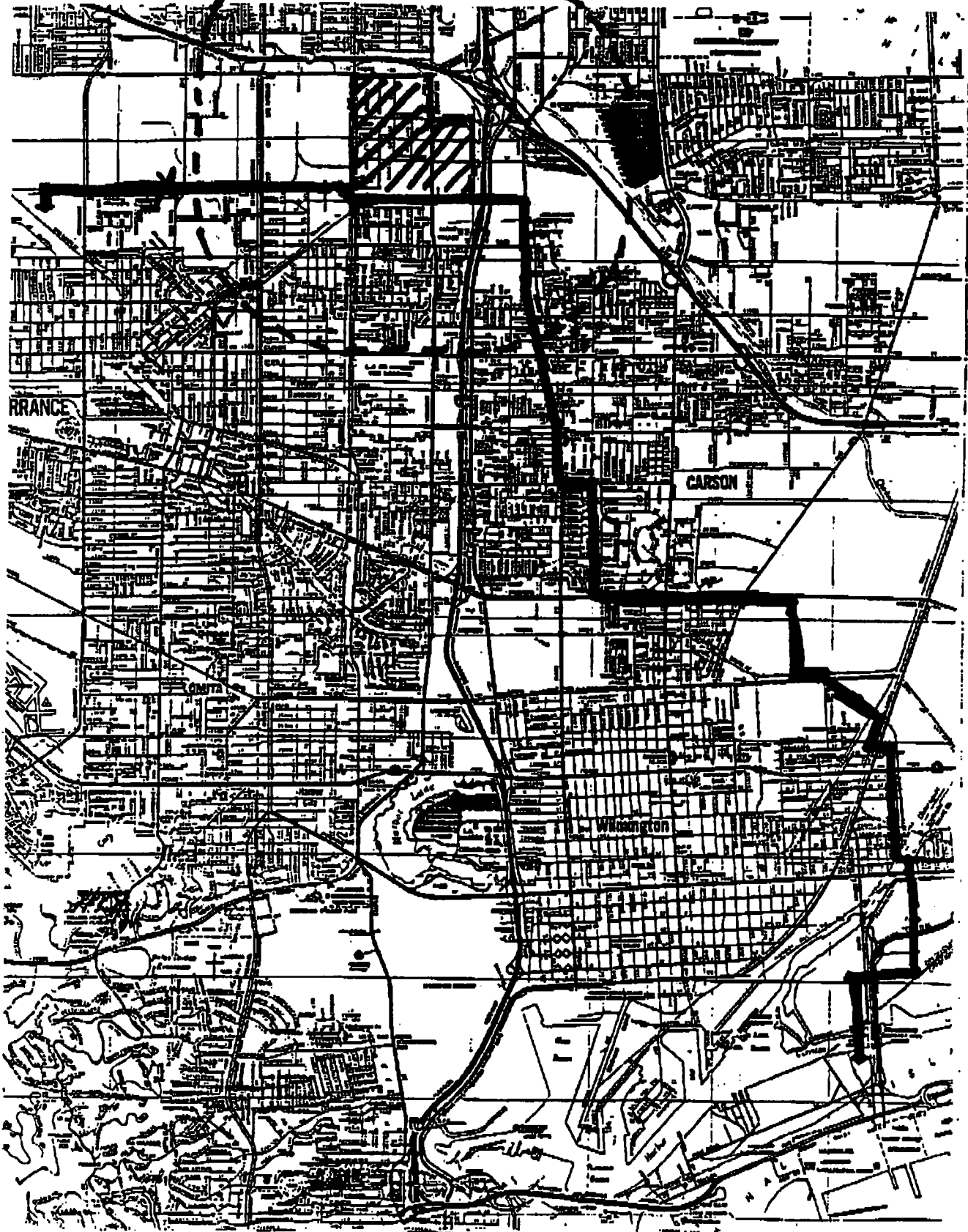
Answer

No.

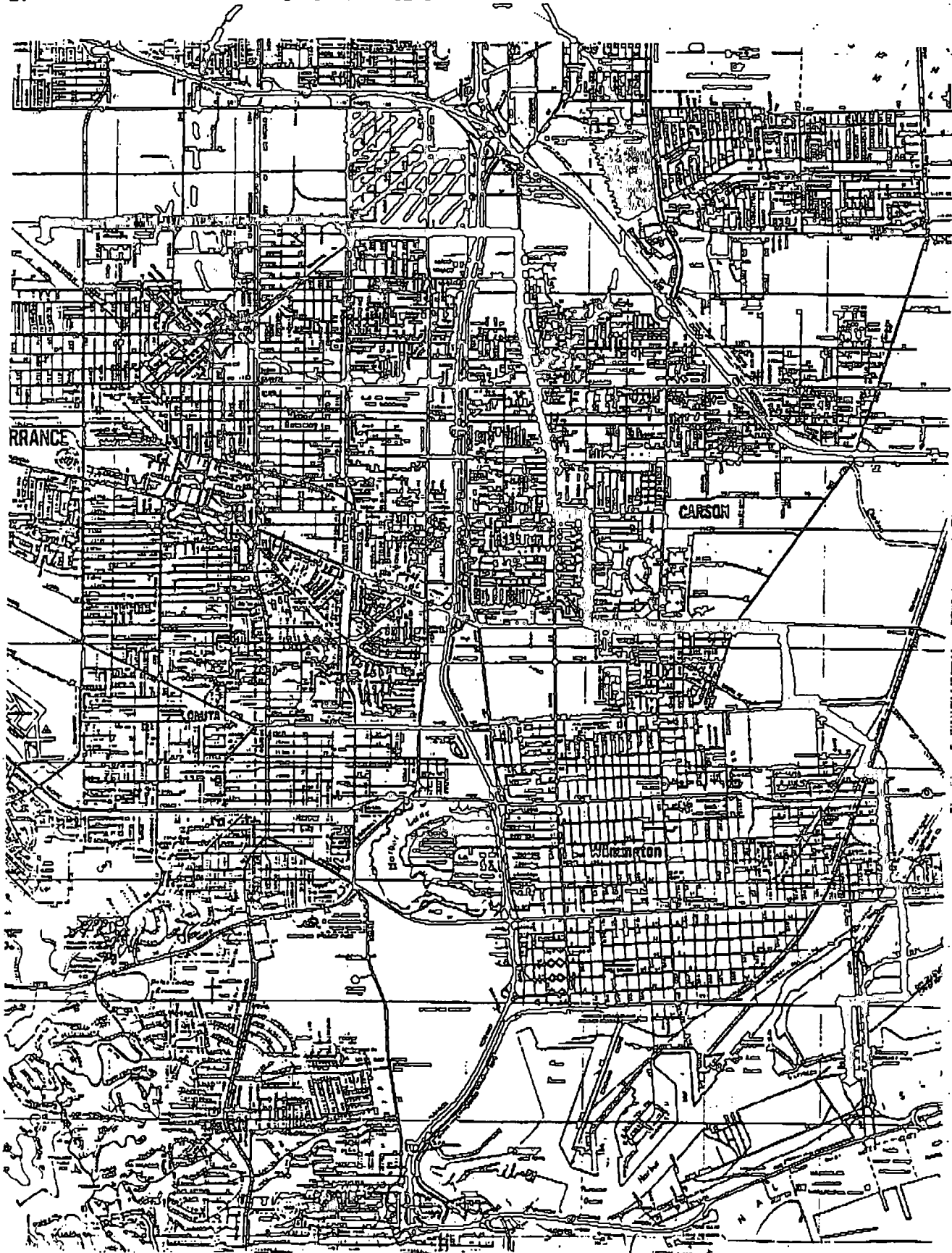
7. Are you aware of any other companies, other than those identified in this letter, which own or operate pipelines or have owned or operated pipelines in the past in the vicinity of the Del Amo site.

Answer

No.



MAP 1



MAP 1

**OFFICE OF STATE FIRE MARSHAL
 LIQUID PIPELINE SAFETY DIVISION
 HYDROSTATIC TEST RESULTS**

PIPELINE DATA

Test Date **3/16/88**

Pipeline Operator DOW CHEMICAL U.S.A.		Company conducting test if other than operator	
Kind of Test <input type="checkbox"/> New <input type="checkbox"/> Replacement <input checked="" type="checkbox"/> Annual <input type="checkbox"/> 3 Year <input type="checkbox"/> 5 Year <input type="checkbox"/> Other			
Pipeline Identification (line number, name, etc) Styrene line			
Pipeline Location (mile post, street, station, etc) From: Long Beach Marine Terminal - 305 Henry Ford Ave., Terminal Island To: Torrance Plant, 305 Crenshaw Blvd, Torrance			
Normal Product Transported Styrene		Normal Operating Pressure P.S.I. at (location) 230 psi	
Maximum Operating pressure P.S.I. at (location) 280 psi			

PIPE DATA

Pipe O.D.	Wall Thickness	Specification & Grade (SMYS)	Length of Pipe Being Tested	Volume (Barrels)
3"	.250	Grade B Seamless		
4"	.250	Grade B Seamless	11.54 total miles	1.467

TEST DATA

Test Medium <input checked="" type="checkbox"/> Water <input type="checkbox"/> Petroleum		Has Waiver been granted ?	
Location of Pressure Recording Equipment Long Beach Marine Terminal		Elevation 0	
Other Elevations	Pipeline--High Point Torrance Plant 70'	Pipeline--Low Point Marine Terminal 0	
Test Equipment	Make & Model of Deadweight Tester	Serial #	Date Last Calibrated
	Make & Model of Chart Recorder Barton	Serial # 05-238-903	Date Last Calibrated 3/14/88
	Make & Model of Temperature Recorder Barton	Serial # 82297	Date Last Calibrated 3/14/88

TEST DATA

Date	Time	Pressure Recorded by	Temperature Source of Readings	Test Medium Change
		<input type="checkbox"/> DWT <input checked="" type="checkbox"/> Recorder <input checked="" type="checkbox"/> Gauge <input type="checkbox"/> Other	<input checked="" type="checkbox"/> Pipe Wall <input type="checkbox"/> Air <input type="checkbox"/> Test Medium <input type="checkbox"/> Other	(+) Added (-) Drained
3/16/88	8:00AM	800	58°	
	9:00	800	62°	
	10:00	800	68°	
	11:00	801	70°	
	12:00	801	72°	
	1:00PM	802	74°	
	2:00	802	74°	
	3:00	802	74°	
	4:00	802	74°	
Total Change of Test Medium				0

FAILURES DURING TEST

Location	Cause	Disposition
None		

CERTIFICATION

Pipeline Operator's Representative Tom Pejovich, Dow Chemical	Title Maintenance Mgr.	Date 3/16/88
Hydrostatic Testing Firm's Representative	Title	Date
Person Witnessing Test for Certifying Firm Robert Lucero, Merco Equipment, Inc.	Title Cert. Witness	Date 3/16/88
Test Data Certified By <i>Ruby Hilar</i>	Title <i>V.P. CONST.</i>	Date <i>3-21-88</i>

NOTE: Test results must be sent to the Office of State Fire Marshal within 30 days of the hydrostatic test.

8-1-1987

OFFICE OF STATE FIRE MARSHAL
LIQUID PIPELINE SAFETY DIVISION
HYDROSTATIC TEST RESULTS

PIPELINE DATA

Test Date 04-11-89

Pipeline Operator Dow Chemical U.S.A.		Company conducting test if other than operator	
Kind of Test <input type="checkbox"/> New <input type="checkbox"/> Replacement <input checked="" type="checkbox"/> Annual <input type="checkbox"/> 3 Year <input type="checkbox"/> 5 Year <input type="checkbox"/> Other			
Pipeline Identification (line number, name, etc) Styrene Line			
Pipeline Location (mile post, street, station, etc) From: Long Beach Terminal, Terminal Island To: Torrance Plant, Torrance			
Normal Product Transported Styrene		Normal Operating Pressure P.S.I. at (location) 230 PSI	
Maximum Operating pressure P.S.I. at (location) 280 PSI		Test 800#	

PIPE DATA

Pipe O.D.	Wall Thickness	Specification & Grade (SMYS)	Length of Pipe Being Tested	Volume (Barrels)
3"	.250	Grande B Seamless		
4"	.25	Grande B Seamless	11.54 Total Miles	1,467

TEST DATA

Test Medium <input checked="" type="checkbox"/> Water <input type="checkbox"/> Petroleum		* Has Waiver been granted ?	
Location of Pressure Recording Equipment Long Beach Terminal		Elevation 0	
Other Elevations	Pipeline--High Point Torrance Plant 70 ft.	Pipeline--Low Point Marine Terminal 0 ft.	
Test Equipment	Make & Model of Deadweight Tester	Serial #	Date Last Calibrated
	Make & Model of Chart Recorder Forboro	Serial # 1	Date Last Calibrated 04-10-89
	Make & Model of Temperature Recorder Barton	Serial # 8	Date Last Calibrated 04-10-89

Date	Time	Pressure Recorded by		Temperature Source of Readings		Test Medium Change (+) Added (-) Drained
		<input type="checkbox"/> DWT <input checked="" type="checkbox"/> Gauge REC	<input checked="" type="checkbox"/> Recorder <input type="checkbox"/> Other GAUGE	<input checked="" type="checkbox"/> Pipe Wall <input type="checkbox"/> Test Medium <input type="checkbox"/> Other	<input type="checkbox"/> Air	
04-18-89	7:00 AM	810	815	64		
	8:00	810	815	65		
	9:00	810	815	66		
	10:00	810	815	66		
	11:00	820	825	72		
	12:00	830	835	78		
	1:00 PM	820	825	79		12:30 PM
	2:00	820	825	80		-4.3 gals.
	3:00	820	825	82		
Total Change of Test Medium						-4.3 gals.

FAILURES DURING TEST

Location	Cause	Disposition

CERTIFICATION

Pipeline Operator's Representative Tom Petrovich	Dow	Title Const. Mgr.	Date 04-18-89
Hydrostatic Testing Firm's Representative		Title	Date
Person Witnessing Test for Certifying Firm James Sumarix	Motco	Title Cert. Witness	Date 04-18-89
Test Data Certified By <i>[Signature]</i>		Title	Date 5-1-89

NOTE: Test results must be sent to the Office of State Fire Marshal within 30 days of the hydrostatic test.

8-1-1987

OFFICE OF STATE FIRE MARSHAL
 LIQUID PIPELINE SAFETY DIVISION
 HYDROSTATIC TEST RESULTS

SFM #90-197

PIPELINE DATA

Pipeline Operator Dow Chemical U.S.A.		Test Date 8-29-90	
Company conducting test if other than operator Metco			
Kind of Test <input type="checkbox"/> New <input checked="" type="checkbox"/> Replacement <input type="checkbox"/> Annual <input type="checkbox"/> 3 Year <input type="checkbox"/> 5 Year <input type="checkbox"/> Other			
Pipeline Identification (line number, name, etc) Styrene Pipeline			
Pipeline Location (mile post, street, station, etc) From: Long Beach Terminal To: Watson Land fill			
Normal Product Transported Styrene		Normal Operating Pressure P.S.I. at (location) 200#	
Maximum Operating pressure P.S.I. at (location) 280#			

PIPE DATA

Pipe O.D.	Wall Thickness	Specification & Grade (SMYS)	Length of Pipe Being Tested	Volume (Barrels)
3.500	.432	Grade B	10,162.22	91.4
4.500	.474	Grade B	6,482.50	103.72
		(per owner)		

TEST DATA

Test Medium <input checked="" type="checkbox"/> Water <input type="checkbox"/> Petroleum		Has Waiver been granted ?	
Location of Pressure Recording Equipment		Elevation	
Other Elevations	Pipeline--High Point	Pipeline--Low Point	
Test Equipment	Make & Model of DWT Chandler Eng.	Serial # 21397	Date Last Calibrated 8-16-90
	Make & Model of Chart Recorder Foxboro #11	Serial #	Date Last Calibrated 8-16-90
	Make & Model of Temperature Recorder Barton #10	Serial #	Date Last Calibrated 8-16-90

TEST DATA

Date	Time	Pressure Recorded by		Temperature Source of Readings		Test Medium Change (+) Added (-) Drained
		<input checked="" type="checkbox"/> DWT <input checked="" type="checkbox"/> Recorder	<input type="checkbox"/> Gauge <input type="checkbox"/> Other	<input checked="" type="checkbox"/> Pipe Wall <input type="checkbox"/> Air	<input type="checkbox"/> Test Medium <input type="checkbox"/> Other	
8-29-90	6:30	404	405	72		
	7:30	404	405	71		
	8:30	407	410	73		
	9:30	417	420	75		
	10:30	427	430	78		
	11:30	437	440	86		
	12:30	441	450	88		
	1:30	447	455	93		
	2:30	452	475	96	Total Change of Test Medium (1)	

FAILURES DURING TEST

Location	Cause	Disposition

CERTIFICATION

Pipeline Operator's Representative L. Ruddick	Dow Chemical	Title Project Manager	Date
Hydrostatic Testing Firm's Representative Jim Summerix	Metco	Title Tester	Date 8-29-90
Person Witnessing Test for Certifying Firm Danny Broussard	S.O.S. Engineering	Title Test Certifier	Date 8-29-90
Test Results Certified By		Title	Date

NOTE: Test results must be sent to the Office of State Fire Marshal within 30 days of the hydrostatic test.

[1] Hourly change shall not be in excess of either 10 gallons or the sum of one gallon and an amount computed at a rate in gallons per mile equivalent to 1/10 in of the nominal internal diameter of the pipe in inches (California Government Code Section 51014).

11/1/1986

OFFICE OF STATE FIRE MARSHAL, PIPELINE SAFETY DIVISION								
CERTIFICATION OF PIPELINE HYDROSTATIC PRESSURE TEST								
SFT1 # 91-208				DATE OF TEST 11-5-91				
THIS IS TO CERTIFY THAT THE PIPELINE OR SECTION OF, WAS								
HYDROSTATICALLY PRESSURE TESTED WITHIN THE FOLLOWING PROCEEDURE								
PIPELINE OPERATOR : DOW CHEMICAL CO.								
OPERATOR REPESENTITIVE : LYNN RUDDICK								
COMPANY TESTING PIPELINE : METCO INC.								
COMPANY WITNESSING TEST : METCO INC.								
PERSON WITNESSING TEST : JAMES SUMERIX								
PIPELINE NAME OR I.D. NUMBER: 4" STYREN LINE						CFM #		
TESTED FROM: L.B. TERMINAL 305 NEW DOCK ST.				CITY OF: LONG BEACH-TERMINAL IS.				
TESTED TO: TORR. PLANT 305 CRENSHAW BLVD.				CITY OF: TORRANCE				
LEN. TESTED: 11.71 MILES DIA. 3" & 4" WALL THICKNESS: .250						GRADE: "B"		
VOL. IN BBLs. 804		TEST MEDIUM: WATER		ELEV. HIGH. 70'		LOW. 0'		
PRESSURE RECORDER MAKE: CLIF MOCK				SERIAL # 2856				
TEMPERATURE RECORDER MAKE: BARTON				SERIAL # 8				
DEADWEIGHT TESTER MAKE: CHANDLER				SERIAL # 23384				
TIME	PRESS. REC.	TEMP. REC.	D.W.T.	////	+ GALS	+ OZS.	- GALS	- OZS.
12:01 P.M.	820-PSI.	90-F	820-PSI.	////				
1:00 P.M.	820-PSI.	94-F	820-PSI.	////				
2:00 P.M.	820-PSI.	98-F	820-PSI.	////				
3:00 P.M.	815-PSI.	96-F	812-PSI.	////				
4:00 P.M.	800-PSI.	90-F	803-PSI.	////				
5:00 P.M.	800-PSI.	86-F	796-PSI.	////				
6:00 P.M.	800-PSI.	81-F	788-PSI.	////				
7:00 P.M.	795-PSI.	77-F	781-PSI.	////				
8:00 P.M.	795-PSI.	74-F	776-PSI.	////				
8:00 P.M.	820-PSI.	74-F	820-PSI.	////	10			
				////				
				////				
				////				
CHANGES IN VOLUME DURING TEST.					10	0	0	0
LENGTH OF TEST: 8-HOURS								
NET CHANGE IN VOLUME AFTER TEST. PLUS 10 GALLONS								
TEST CYCLE: () REPLACEMENT (X) ANNUAL () 2-YEAR () 5-YEAR () OTHER								
NORMAL OPERATING PRESSURE: 300-PSI.								
MAXIMUM ALLOWABLE OPERATING PRESSURE: 776-PSI.								
COMMENTS:								
REPORT PREPARED BY : DUSTY HILYAR								
COMPANY: METCO EQUIP. CO. INC.								
TITLE: VICE PRESIDENT.								

SENT BY:

3- 5-92 ; 12:53 ; DOW CHEMICAL LBMT-

5176389564

:# 2/ 4

EDM Services, Inc.

40 West Cochran, Suite 112

Simi Valley, California 93065

Phone: (805) 527-3300 FAX: (805) 583-1607

California State Fire Marshal

7171 Bowling Drive, Suite 101

Sacramento, California 95822

Phone: (916) 427-455

LEAK DATA FORM

Pipeline Operating Company:		THE DOW CHEMICAL COMPANY	
CSFM Pipeline Description:		COMBINATION 3" 4" T.I.	Leak Number:
CSFM Inspection Unit No.		130	R-130-602
Questionnaire Completed By:		M. LUNNEN	CSFM No.: 072
Date Data Collected:		6-4-91	Operating Company Rep.
Date of Leak:		2-13-85	LINDSEY RUDOLPH
Map Page:		68	Telephone:
Interstate Line (Check)			213-533-5239
Common Carrier (Yes or No)		NO	County In Which Leak Occurred
Leak Within 500' of Rail Line?		YES	LOS ANGELES
What type of component leaked? (Check one and state year installed)		Map Coordinates	
Pipe	X	Longitudinal Weld	62
Valve		Girth Weld	
Pump		Threaded Connection	
Welded Fitting		Bolted Connection	
Other (Specify)		Year Item Installed	1947/1950
Cause of leak? (Check one and add any necessary comments)			
External Corrosion		Internal Corrosion	
3rd Party - Construction	X	3rd Party - Train Derailment	
3rd Party - Farm Equipment		3rd Party - Other (Specify)	
Equipment Malfunction		Human Operating Error	
Maintenance		Design Flaw	
Other (Specify)			
Comments:		PIN HOLE LEAK AFTER DAMAGE TO COATING	
DURING CONSTRUCTION IN AREA AT SOME PRIOR TIME			
Number of Human Fatalities		Number of Human Injuries	
0		0	
Property Damage (\$)		Describe Property Damage	
6,000		CLEAN UP	
AND REPAIR			
Type of Fluid Spilled:		Spill Size (Barrels)	
STYRENE		21	
If leak was caused by derailment, complete this section.			
Train Operator		Main (M) or Other (O) Line	
Leak During Derailment		Leak After Derailment	
Comments:			
Type of Coating		Type of C.P. System	
COAL TAR		I.C.	
Date of Last C.P. Survey		Pipe Description at Leak	
1/85		UNKNOWN	
Pipe Diameter (Inches)		Wall Thickness (Inches)	
4"		0.230 Ave	
Date Pipe Installed		Last Internal Inspection	
1947/1950		NONE	
Pipe Cover (Inches)		Date of Last Hydrotest	
24"		4/84	
Nearest Block Valve (mi.)		Nearest Block Valve (mi.)	
0.6		0.9	
Maximum Operating Pressure		Pressure at Time of Leak	
340 PSI		270 PSI	
Operating Temperature		Flow Rate (bph)	
70°F		110	

EDM Services, Inc.

40 West Cochran, Suite 112
Simi Valley, California 93065
Phone: (805) 527-3300 FAX: (805) 583-1807

California State Fire Marshal

7171 Bowling Drive, Suite 101
Sacramento, California 95822
Phone: (916) 427-450

LEAK DATA FORM

Pipeline Operating Company:		THE DOW CHEMICAL COMPANY	
CSFM Pipeline Description:	COMBINATION 34" T.I.	Leak Number:	R-130-004
CSFM Inspection Unit No.	130	CSFM No.:	072
Questionnaire Completed By:	M. LUNNEN	Operating Company Rep.	UNION RUCKER
Date Data Collected:	6-4-91	Telephone:	213-533-5239
Date of Leak:	7-18-85	County in Which Leak Occurred	LOS ANGELES
Map Page:	68	Map Coordinates	E2
Interstate Line (Check)	<input type="checkbox"/>	Intrastate Line (Check)	<input checked="" type="checkbox"/>
Common Carrier (Yes or No)	NO	SMSA (Yes or No)	YES
Leak Within 500' of Rail Line?	YES	If Yes, Main (M) or Other (O)?	O
What type of component leaked? (Check one and state year installed)			
Pipe	<input checked="" type="checkbox"/>	Longitudinal Weld	<input type="checkbox"/>
Valve	<input type="checkbox"/>	Girth Weld	<input type="checkbox"/>
Pump	<input type="checkbox"/>	Threaded Connection	<input type="checkbox"/>
Welded Fitting	<input type="checkbox"/>	Bolted Connection	<input type="checkbox"/>
Other (Specify)		Year Item Installed	1947 / 1950
Cause of leak? (Check one and add any necessary comments)			
External Corrosion	<input type="checkbox"/>	Internal Corrosion	<input type="checkbox"/>
3rd Party - Construction	<input checked="" type="checkbox"/>	3rd Party - Train Derailment	<input type="checkbox"/>
3rd Party - Farm Equipment	<input type="checkbox"/>	3rd Party - Other (Specify)	<input type="checkbox"/>
Equipment Malfunction	<input type="checkbox"/>	Human Operating Error	<input type="checkbox"/>
Maintenance	<input type="checkbox"/>	Design Flaw	<input type="checkbox"/>
Other (Specify)			
Comments:	PIN HOLE LEAK AFTER DAMAGE TO COATING DURING CONSTRUCTION IN AREA AT SOME PRIOR TIME		
Number of Human Fatalities	0	Number of Human Injuries	0
Property Damage (\$)	2000	Describe Property Damage	CLEANUP AND REPAIR
Type of Fluid Spilled:	STYRENE	Spill Size (Barrels)	41
If leak was caused by derailment, complete this section.			
Train Operator:		Main (M) or Other (O) Line	
Leak During Derailment	<input type="checkbox"/>	Leak After Derailment	<input type="checkbox"/>
Comments:			
Type of Coating:	COAL TAR	Type of C.P. System	I.C.
Date of Last C.P. Survey	4/85	Pipe Description at Leak	UNKNOWN
Pipe Diameter (Inches)	4"	Wall Thickness (Inches)	0.240
Date Pipe Installed	1947 / 1950	Last Internal Inspection	NONE
Pipe Cover (Inches)	24"	Date of Last Hydrotest	3/85
Nearest Block Valve (mi.)	0.6	Nearest Block Valve (mi.)	0.9
Maximum Operating Pressure	340 PSI	Pressure at Time of Leak	270 PSI
Operating Temperature	70°F	Flow Rate (bph)	110

EDM Services, Inc.

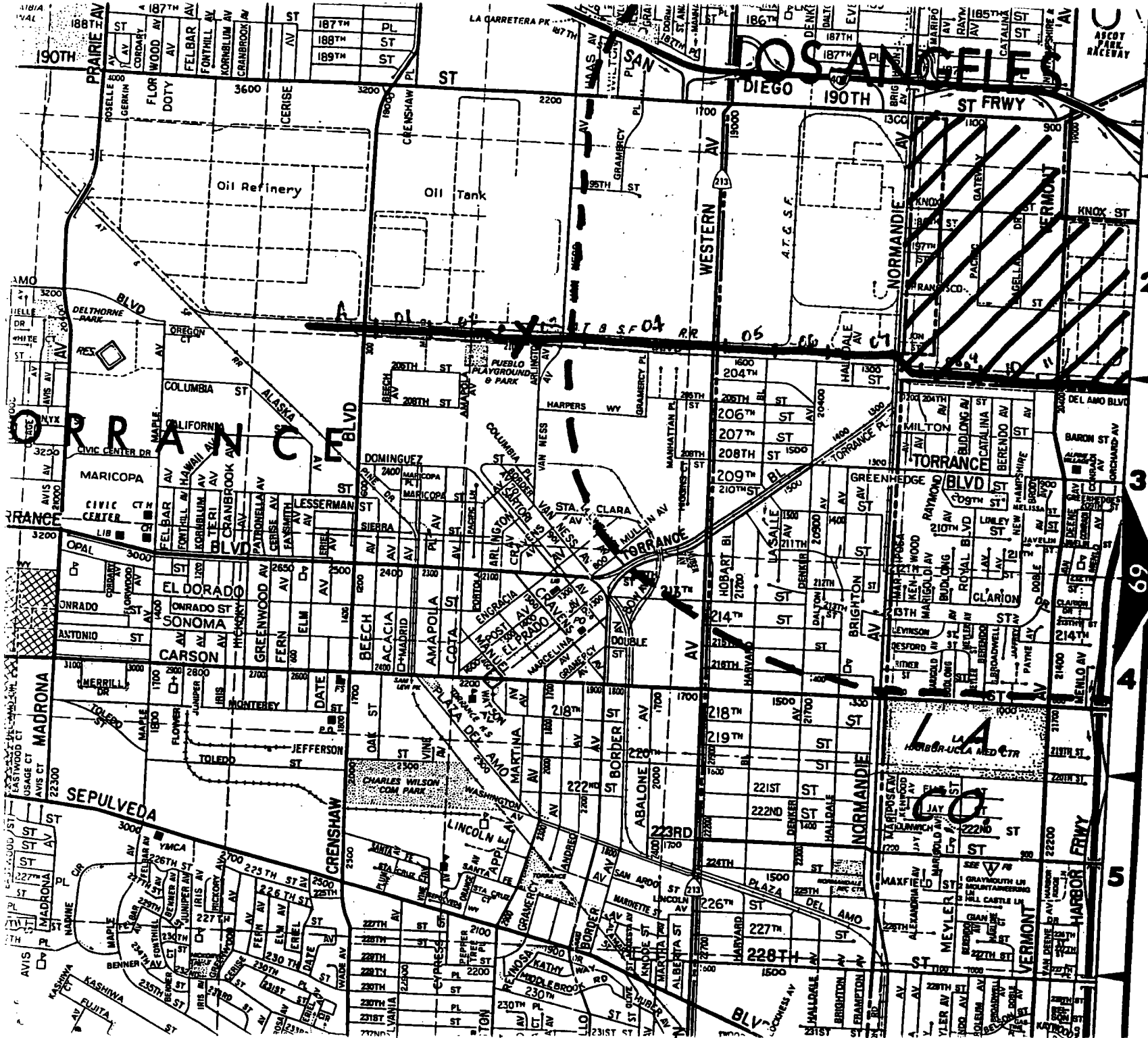
40 West Cochran, Suite 112
 Simi Valley, California 93065
 Phone: (805) 527-3300 FAX: (805) 583-1807

California State Fire Marshal

7171 Bowling Drive, Suite 101C
 Sacramento, California 95822
 Phone: (916) 427-4500

LEAK DATA FORM

Pipeline Operating Company:		TUE DOW CHEMICAL COMPANY	
CSFM Pipeline Description:		COMBINATION 3" 4" T.I.	Leak Number:
CSFM Inspection Unit No.:		130	R-130-005
Questionnaire Completed By:		M. LUNNEN	CSFM No.:
Date Data Collected:		6-4-91	072
Date of Leak:		2-15-86	Operating Company Rep.:
Map Page:		68	Telephone:
Interstate Line (Check)			213-533-5239
Common Carrier (Yes or No)		NO	County In Which Leak Occurred:
Leak Within 500' of Rail Line?		YES	LOS ANGELES
What type of component leaked? (Check one and state year installed)		Map Coordinates:	
Pipe	X	Longitudinal Weld	E2
Valve		Girth Weld	
Pump		Threaded Connection	
Welded Fitting		Bolted Connection	
Other (Specify)		Year Item Installed	1947/1950
Cause of leak? (Check one and add any necessary comments)			
External Corrosion		Internal Corrosion	
3rd Party - Construction	X	3rd Party - Train Derailment	
3rd Party - Farm Equipment		3rd Party - Other (Specify)	
Equipment Malfunction		Human Operating Error	
Maintenance		Design Flaw	
Other (Specify)			
Comments: PIN HOLE LEAK AFTER DAMAGE TO COATING DURING CONSTRUCTION IN AREA AT SOME PRIOR TIME			
Number of Human Fatalities	0	Number of Human Injuries	0
Property Damage (\$)	\$500	Describe Property Damage:	REPAIR AND
CLEAN UP (REPLACED LINE DUE TO FREQUENT LEAKS, LINE REPLACED 8-86, LOST \$50,000 SEE R-130-008 (0005) SHEET 3 OF 4)			
Type of Fluid Spilled	STYRENE	Spill Size (Barrels)	<1
If leak was caused by derailment, complete this section:			
Train Operator		Main (M) or Other (O) Line	
Leak During Derailment		Leak After Derailment	
Comments:			
Type of Coating	COAL TAR	Type of C.P. System	I.C.
Date of Last C.P. Survey	1/86	Pipe Description at Leak	UNKNOWN
Pipe Diameter (Inches)	4"	Wall Thickness (Inches)	0.240
Date Pipe Installed	1947/1950	Last Internal Inspection	NONE
Pipe Cover (Inches)	24"	Date of Last Hydrotest	3/85
Nearest Block Valve (mi.)	0.6	Nearest Block Valve (mi.)	0.9
Maximum Operating Pressure	340 PSI	Pressure at Time of Leak	270 PSI
Operating Temperature	70°F	Flow Rate (bph)	110



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MAP 69 SEE 4

1" = 2000'
1M = 2.64"

MAP 2